COMPRESSOR DEFINITION

Designation	**EM T2121U**
Nominal Voltage/Frequency	**220-240 V 50 Hz**
Engineering Number	**872DA62**

A - APPLICATION / LIMIT WORKING CONDITIONS

1 Type	Hermetic reciprocating compressor		
2 Refrigerant	R-290		
3 Nominal voltage and frequency	220-240 / 50	[V / Hz]	
4 Application type	Low Back Pressuure R290		
4.1 Evaporating temperature range	-40°C to -10°C	(-40°F to 14°F)	
5 Motor type	CSIR		
6 Starting torque	HST - Hight starting torque		
7 Expantion device	Capillary tube or Expansion valve		
8 Compressor cooling		Operating voltage range	
		50 Hz	60 Hz
8.1 LBP (32ºC Ambient temperature)	-	-	-
8.2 LBP (43ºC Ambient temperature)	-	-	-
8.3 HBP (32ºC Ambient temperature)	-	-	-
8.4 HBP (43ºC Ambient temperature)	-	-	-
9 Maximum condensing pressures/temperature			
9.1 Operating (gauge)	19.1	[kgf/cm²] (272 psig)	/ ºC - ºF
9.2 Peak (gauge)	21.2	[kgf/cm²] (301 psig)	/ ºC - ºF
10 Maximum winding temperature	130	[°C]	

B - MECHANICAL DATA

1 Commercial designation	1/3-	[hp]
2 Displacement	5.56	[cm³] (0.339 cu.in)
2.1 Bore [mm]	22.500	
2.2 Stroke [mm]	14.000	
3 Lubricant charge	180	[ml] (6.09 fl.oz.)
3.1 Lubricants approved		
3.2 Lubricants type/viscosity	ESTER / ISO22	
4 Weight (with oil charge)	7.8	[kg] (17.20 lb.)
5 Nitrogen charge	-	[kgf/cm²]

C - ELETRICAL DATA

1 Nominal Voltage/Frequency/Number of Phases	220-240 V 50 Hz 1 ~ (Single phase)	
2 Starting device type	Current Relay	
2.1 Starting device	MTRP-0015	
3 Start capacitor	43-53(330)	[µF(VAC minimum)]
4 Run capacitor	-	[µF(VAC minimum)]
5 Motor protection	T0045/G6	
6 Start winding resistance		[Ω at 25ºC (77ºF)] +/- 8%
7 Run winding resistance		[Ω at 25ºC (77ºF)] +/- 8%
8 LRA - Locked rotor amperage (50 Hz)	7.70	[A] - Measured according to UL 984
9 FLA - Full load amperage L/MBP (50 Hz)	-	[A]
10 FLA - Full Load Amperage HBP (50 Hz)	-	[A]
11 Approval boards certification	VDE	

D - PERFORMANCE - CHECK POINT DATA

TEST CONDITIONS:			**EN12900LBP_HH**			Evaporating temperature		**-35°C (-31°F)**
@220V50Hz			**Static**			(Condensing temperature		**40°C (104°F))**
Cooling capacity +/- 5%			Power consumption +/- 5%	Current consumption +/- 5%	Gas flow rate +/- 5%	EFFICIENCY RATE +/- 7%		
[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]
543	137	159	129	0.99	1.72	4.21	1.06	1.23

E - PERFORMANCE - CURVES

TEST CONDITIONS:		**EN12900HH**					(Condensing temperature **35ºC (+95ºF))**			
@220V50Hz		**Static**								
Evaporating temperature		Cooling capacity +/- 5%			Power consumption +/- 5%	Current consumption +/- 5%	Gas flow rate +/- 5%	EFFICIENCY RATE +/- 7%		
°C	**(°F)**	[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]
-40	**(-40)**	448	113	131	113	0.95	1.35	3.96	1.00	1.16
-35	**(-31)**	580	146	170	128	0.98	1.76	4.54	1.14	1.33
-30	**(-22)**	742	187	217	142	1.02	2.25	5.23	1.32	1.53
-25	**(-13)**	934	235	274	155	1.06	2.84	6.03	1.52	1.77
-20	**(- 4)**	1155	291	339	167	1.10	3.53	6.92	1.75	2.03
-15	**(+ 5)**	1407	355	412	178	1.14	4.32	7.89	1.99	2.31
-10	**(+14)**	1688	425	495	189	1.18	5.20	8.93	2.25	2.62

TEST CONDITIONS:		**EN12900HH**					(Condensing temperature **45ºC (+113ºF))**			
@220V50Hz		**Static**								
Evaporating temperature		Cooling capacity +/- 5%			Power consumption +/- 5%	Current consumption +/- 5%	Gas flow rate +/- 5%	EFFICIENCY RATE +/- 7%		
°C	**(°F)**	[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]
-40	**(-40)**	378	95	111	115	0.95	1.25	3.31	0.83	0.97
-35	**(-31)**	495	125	145	132	0.99	1.64	3.75	0.94	1.10
-30	**(-22)**	640	161	188	149	1.04	2.12	4.28	1.08	1.25
-25	**(-13)**	813	205	238	166	1.09	2.70	4.88	1.23	1.43
-20	**(- 4)**	1014	256	297	183	1.15	3.38	5.54	1.40	1.62
-15	**(+ 5)**	1244	314	365	199	1.21	4.17	6.25	1.58	1.83
-10	**(+14)**	1502	379	440	215	1.27	5.06	7.00	1.76	2.05

TEST CONDITIONS:		**EN12900HH**					(Condensing temperature **55ºC (+131ºF))**			
@220V50Hz		**Static**								
Evaporating temperature		Cooling capacity +/- 5%			Power consumption +/- 5%	Current consumption +/- 5%	Gas flow rate +/- 5%	EFFICIENCY RATE +/- 7%		
°C	**(°F)**	[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]
-40	**(-40)**	312	79	92	115	0.95	1.14	2.70	0.68	0.79
-35	**(-31)**	409	103	120	134	1.00	1.50	3.06	0.77	0.90
-30	**(-22)**	533	134	156	154	1.06	1.95	3.47	0.87	1.02
-25	**(-13)**	683	172	200	174	1.12	2.51	3.93	0.99	1.15
-20	**(- 4)**	859	217	252	195	1.19	3.17	4.41	1.11	1.29
-15	**(+ 5)**	1063	268	311	216	1.27	3.94	4.92	1.24	1.44
-10	**(+14)**	1293	326	379	238	1.36	4.82	5.42	1.37	1.59

F - EXTERNAL CHARACTERISTICS

1 Base plate	European Standard		
2 Tray holder	No		
3 Connectors			
3.1 SUCTION	6.1 +0.10/+0.00	[mm]	(0.240" +0.004"/+0.000")
3.1.1 Material	Copper		
3.1.2 Shape	Slanted 42°		
3.2 DISCHARGE	4.94 +0.08/-0.08	[mm]	(0.194" +0.003"/-0.003")
3.2.1 Material	Copper		
3.2.2 Shape	Straight		
3.3 PROCESS	6.1 +0.10/+0.00	[mm]	(0.240" +0.004"/+0.000")
3.3.1 Material	Copper		
3.3.2 Shape	Slanted 42°		
3.4 Oil cooler (Copper)	No	[mm]	
3.5 Connector sealing	Rubber Plugs		